IEEE P802.11
Wireless LANs

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| IEEE 802.11 Task Group AYNovember 2018 Bangkok Meeting Minutes |
| Date: 2018-11-16 |
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Abstract

Task Group AY meeting minutes from the IEEE 802.11 Bangkok session, November 11-16, 2018.

**IEEE 802.11 Task Group AY**

**November 2018 Bangkok Plenary Meeting**

**November 11-16, 2018**

**Monday, November 12, 2018, PM1 Session (13:30-15:30)**

Attendance: around 30 people

1. The IEEE 802.11ay task group meeting was called to order at 13:30 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-18/1727r2.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-11)
	1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
	2. Chair asked if anybody has any disclosures related to the patent policy. None.
	3. Chair asked if there were any questions on any of the above items. None.
	4. Chair reminded all to record their attendance.
	5. Chair reminded all to upload their presentations.
5. Chair reviewed the meeting time slots, locations and agenda items for the week (see slide 13 of the agenda document).
6. Chair proceeded to discuss the agenda items for the Monday, November 12, 2018, Monday PM1 session (slide 15) and asked if anyone wants to add any additional agenda items (none).
7. Chair reviewed the progress of the Task Group AY and a list of contributions being discussed in the teleconference calls (slides 17-20).
8. Chair reviewed Task Group Documents and amendment text submissions (slide 21).
9. Motion #514: Motion to approve the September 2018 Waikoloa meeting minutes
	1. Move: Claudio Da Silva
	2. Second: Sang Kim
	3. No objections noted. Unanimous consent.
	4. The September 2018 meeting minutes were approved.
10. Motion #515: Move to approve Task Group AY minutes of the teleconference calls on October 3, October 10, October 17, October 31, and November 7:

<https://mentor.ieee.org/802.11/dcn/18/11-18-1718-04-00ay-task-group-ay-october-2018-conference-call-meeting-minutes.docx>

<https://mentor.ieee.org/802.11/dcn/18/11-18-1793-00-00ay-tg-ay-november-7-2018-conference-call-meeting-minutes.docx>

* 1. Move: Claudio da Silva
	2. Second: Sang Kim
	3. No objections noted. Unanimous consent.
	4. The October 3, October 10, October 17, October 31, and November 7 conference calls meeting minutes were approved.
1. Chair reviewed the submissions scheduled for the week (slides 24-29).
2. Chair reviewed the agenda setting for the week (slide 30).
3. Discussion on the timeline as of May 2018 interim (slide 31 and 32)
4. Motions
	1. Motion #516. Comment resolution.
		1. Move to accept the comment resolution for CIDs:
* 3311, 3382, 3312, 3313, 3314, 3315, 3316, 3331, 3332, 3333, 3334, 3375, 3376, 3596, 3622, 3704, 3377, 3623, 3705, 3201, 3378, 3624, 3706, 3202, 3625, 3301, 3732, 3175, 3720, 3721, 3724, 3212, 3213, 3178, 3179, 3725, 3214, 3730, 3722, 3602, 3381, 3380, 3268, 3177, 3180, 3181, 3172, 3173, 3174, 3183, 3090, 3091, 3166, 3740, 3086, 3092, 3093, 3088, 3087, 3089, 3130, 3120, 3121, 3122, 3123, 3062, 3064, and 3065 as proposed in 18/1678r1;
* CID 3667 as proposed in 18/1347r0; and
* CIDs 3317, 3318, 3319, 3320, 3321, 3322, 3323, 3324, 3325, 3326, 3327, 3328, 3329, 3330, and 3288 as proposed in 18/1753r0.
	+ 1. Move: Claudio da Silva
		2. Second: Assaf Kasher
		3. Result: The motion is passed (15 Yes; 0 No; 0 Abstain).
	1. Motion #517. Comment Resolution for Coexistence Assurance Document
		1. Move to accept the comment resolution for CIDs 3031, 3272, 3672, 3675, 3674, 3678, 3681, 3677, 3676, 3683, 3682, 3686, 3673, 3687, 3684, 3679, 3680, and 3685 as proposed in 18/1691r0.
		2. Move: Claudio da Silva
		3. Second: Alecsander Eitan
		4. Result: The motion is passed (15 Yes; 0 No; 0 Abstain).
	2. Motion #518. Comment resolution.
		1. Move to accept the comment resolution for CIDs 3007, 3267, 3448, 3231, 3719, 3399, 3367, 3525, and 3526 as proposed in 18/1751r1.
		2. Move: Claudio da Silva
		3. Second: Assaf Kasher
		4. Result: The motion is passed (14 Yes; 0 No; 0 Abstain).
	3. Motion #519. Comment resolution.
		1. Move to accept the comment resolution for CIDs 3106, 3107, 3114, 3115, 3116, 3117, 3197, 3274, 3368, 3698, 3695, 3696, 3697, 3699, 3701, 3702, and 3703 as proposed in 18/1773r0.
		2. Move: Thomas Handte
		3. Second: Oren Kedem
		4. Result: The motion is passed (15 Yes; 0 No; 0 Abstain).
	4. Motion #520.
		1. Move to accept the comment resolution for CIDs 3265, 3437, 3438, 3439, 3440, 3441, 3442, 3483, 3484, 3485, 3486, 3490, 3567, 3568, 3653, 3691, 3726, 3097, 3294, 3459, 3360, 3405, 3406, 3408, 3417, 3434, and 3436 as proposed in 18/1768r2.
		2. Move: Oren Kedem
		3. Second: Claudio da Silva
		4. Result: The motion is passed (14 Yes; 0 No; 0 Abstain).
	5. Motion #521. Comment resolution.
		1. Move to accept the comment resolution for CIDs 3139, 3271, and 3694 as proposed in 18/1569r1.
		2. Move: Claudio da Silva
		3. Second: Sang Kim
		4. Result: The motion is passed (14 Yes; 0 No; 0 Abstain).
	6. Motion #522. Comment resolution.
		1. Move to accept the comment resolution for CID 3580 as proposed in 18/1648r3.
		2. Move: Alecsander Eitan
		3. Second: Oren Kedem
		4. Result: The motion is passed (14 Yes; 1 No; 0 Abstain).
1. Comment Resolution Presentations
	1. Presentation by Claudio da Silva (Intel), LB234 comment resolutions - PHY and BF II. Doc. IEEE 11-18/1751r1.
		1. Opened floor for discussion
		2. No objections to add to the motions
	2. Presentation by Claudio da Silva (Intel), LB234 comment resolutions - PHY and BF III. Doc. IEEE 11-18/1766r0.
		1. Opened floor for discussion
		2. Except for 3398, no objections to add all others to the motions
	3. Presentation by Oren Kedem (Intel), TDD BF related CIDs. Doc. IEEE 11-18/1837r0.
		1. Opened floor for discussion
2. Meeting recessed at 15:29 and will resume on Monday PM2.

**Monday, November 12, 2018, PM2 Session (16:00-18:00)**

Attendance: around 30 people

1. The meeting was called to order at 16:00 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-18/1727r2.
3. Chair reminded all about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules.
	1. Chair asked if anybody has any disclosures related to the patent policy. None.
	2. Chair reminded all to record their attendance.
4. Comment Resolution Presentations
	1. Presentation by Oren Kedem (Intel), Resolution of TDD sector switch related CIDs. Doc. IEEE 11-18/1838r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	2. Presentation by Oren Kedem (Intel), Resolution of SAR related CIDs. Doc. IEEE 11-18/1839r1.
		1. Opened floor for discussion
		2. No objections to add to the motions
	3. Presentation by Assaf Kasher (Qualcomm), LB234 comment resolution I. Doc. IEEE 11-18/1770r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	4. Presentation by Assaf Kasher (Qualcomm), LB234 channel aggregation CIDs. Doc. IEEE 11-18/1788r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	5. Presentation by Thomas Handte (Sony), Resolution of TXVECTOR comments of LB234. Doc. IEEE 11-18/1773r1.
		1. Opened floor for discussion
		2. No objections to add to the motions
	6. Presentation by Alecsander Eitan (Qualcomm), Editorial CIDs. Doc. IEEE 11-18/1786r1.
		1. Opened floor for discussion
		2. No objections to add to the motions
5. Meeting recessed at 17:34 and will resume on Tuesday AM2.

**Tuesday, November 13, 2018, AM2 Session (10:30-12:30)**

Attendance: around 27 people

1. The meeting was called to order at 10:30 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-18/1727r3.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reminded all about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules.
	1. Chair asked if anybody has any disclosures related to the patent policy. None.
	2. Chair reminded all to record their attendance.
5. Comment Resolution Presentations
	1. Presentation by Lei Huang (Panasonic), Comment resolution on MIMO BF. Doc. IEEE 11-18/1683r1.
		1. Opened floor for discussion
		2. No objections to add to the motions
	2. Presentation by Lei Huang (Panasonic), Comment resolution on CID 3455. Doc. IEEE 11-18/1825r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	3. Presentation by Alecsander Eitan (Qualcomm), Resolution to CID 3289 and 3533-3535. Doc. IEEE 11-18/1787r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	4. Presentation by Alecsander Eitan (Qualcomm), LB234 CID 3460 resolution. Doc. IEEE 11-18/1791r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	5. Presentation by Alecsander Eitan (Qualcomm), Resolution to CIDs related to section 9.4.2.21.16. Doc. IEEE 11-18/1745r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	6. Presentation by Alecsander Eitan (Qualcomm), Resolution to CID related to CH\_BANDWIDTH. Doc. IEEE 11-18/1789r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	7. Presentation by Lei Huang (Panasonic), CR on CID 3364. Doc. IEEE 11-18/1899r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
6. Meeting recessed at 12:21 and will resume on Wednesday PM1.

**Wednesday, November 14, 2018, PM1 Session (13:30-15:30)**

Attendance: around 28 people

1. The meeting was called to order at 13:30 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-18/1727r5.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reminded all about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules.
	1. Chair asked if anybody has any disclosures related to the patent policy. None.
	2. Chair reminded all to record their attendance.
5. Comment Resolution Presentations
	1. Presentation by Assaf Kasher (Qualcomm), LB234-CID-3460-Resolution. Doc. IEEE 11-18/1791r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	2. Presentation by Mohamed Abouelseoud (Sony), Proposed resolution of CID 3518. Doc. IEEE 11-18/1911r0.
		1. Opened floor for discussion
	3. Presentation by Mohamed Abouelseoud (Sony), Proposed resolution of CID 3518 text. Doc. IEEE 11-18/1910r0.
		1. Opened floor for discussion
	4. Presentation by Solomon Trainin (Qualcomm), Introduction to TDD general and TDD MLME comment resolution. Doc. IEEE 11-18/1798r0.
		1. Opened floor for discussion
	5. Presentation by Solomon Trainin (Qualcomm), Comment resolution for CIDs 3358-3643. Doc. IEEE 11-18/1801r0.
		1. Opened floor for discussion
	6. Presentation by Oren Kedem (Intel), Resolutions to CIDs related to TDD scheduling, channel access and power save -part 3. Doc. IEEE 11-18/1985r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
6. Meeting recessed at 17:29 and will resume on Thursday AM1.

**Thursday, November 15, 2018, AM1 Session (08:00-10:00)**

Attendance: around 28 people

1. The meeting was called to order at 08:00 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-18/1727r6.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reminded all about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules.
	1. Chair asked if anybody has any disclosures related to the patent policy. None.
	2. Chair reminded all to record their attendance.
5. Comment Resolution Presentations
	1. Presentation by Lei Huang (Panasonic), CR on CID 3364. Doc. IEEE 11-18/1899r1.
		1. Opened floor for discussion
		2. No objections to add to the motions
	2. Presentation by Solomon Trainin (Qualcomm), Resolution of CID 3462. Doc. IEEE 11-18/1879r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	3. Presentation by Solomon Trainin (Qualcomm), Comment resolution for CIDs 3358-3643. Doc. IEEE 11-18/1801r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	4. Presentation by Alecsander Eitan (Qualcomm), CID related to CH\_BANDWIDTH. Doc. IEEE 11-18/1789r2.
		1. Opened floor for discussion
		2. No objections to add to the motions
	5. Presentation by Li-Hsiang Sun (Interdigital), Proposed resolution of CID 3443. Doc. IEEE 11-18/1895r1.
		1. Opened floor for discussion
		2. No objections to add to the motions
	6. Presentation by A. Batra, SK Yong (Apple), Updated EVM Measurement Text. Doc. IEEE 11-18/2032r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	7. Presentation by C. Hansen (Peraso), LB234 Unsolicited Block ACK Resolutions. Doc. IEEE 11-18/1854r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	8. Presentation by George Calcev (Huawei), CIDs- LOS determination. Doc. IEEE 11-18/1894r0.
		1. Opened floor for discussion
		2. No objections to add to the motions
	9. Presentation by Kome Oteri (InterDigital), D2.0 Comment Resolutions on Hybrid Beamforming - Part 1. Doc. IEEE 11-18/1970r1.
		1. Opened floor for discussion
		2. No objections to add to the motions
6. Meeting recessed at 09:00 and will resume on Wednesday PM1.

**Thursday, November 15, 2018, PM1 Session (13:30-15:30)**

Attendance: around 28 people

1. The meeting was called to order at 13:30 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-18/1727r8.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reminded all about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules.
	1. Chair asked if anybody has any disclosures related to the patent policy. None.
	2. Chair reminded all to record their attendance.
5. Motions
	1. Motion #523: Comment Resolution. Move to accept the comment resolution for CIDs 3216, 3461, 3226, and 3229 as proposed in 18/1751r1; and CIDs 3232, 3228, 3230, 3235, 3390, 3449, 3710, and 3084 as proposed in 18/1766r0.
		1. Move: Claudio da Silva
		2. Second: Assaf Kasher
		3. Result: The motion is passed (13 Yes; 0 No; 0 Abstain).
	2. Motion #524: Comment Resolution. Move to accept the comment resolution for CIDs 3472, 3473, 3512, 3487, 3511, and 3631 as proposed in 18/1838r0; CIDs 3003, 3004, 3005, 3006, 3282, 3283, 3336, 3337, 3345, 3395, 3421, 3427, 3464, 3468, 3469, 3717, and 3718 as proposed in 18/1839r2; and CIDs 3096, 3463, 3474, 3735, 3664, 3716, 3737, and 3738 as proposed in 18/1895r0
		1. Move: Oren Kedem
		2. Second: Claudio da Silva
		3. Result: The motion is passed (15 Yes; 0 No; 0 Abstain).
	3. Motion #525: Comment Resolution. Move to accept the comment resolution for CIDs 3200, 3550, 3524, 3554, 3553, 3559, 3450, 3452, 3457, 3204, 3203, 3205, 3207, 3383, and 3727 as proposed in 18/1770r1; CIDs 3191, 3192, and 3193 as proposed in 18/1788r1; and CIDs 3460 and 3285 as proposed in 18/1791r0.
		1. Move: Assaf Kasher
		2. Second: Oren Kedem
		3. Result: The motion is passed (12 Yes; 0 No; 0 Abstain).
	4. Motion #526: Move to accept the comment resolution for CID 3103 as proposed in 18/1773r1.
		1. Move: Thomas Handte
		2. Second: Mohamed Abouelseoud
		3. Result: The motion is passed (10 Yes; 0 No; 0 Abstain).
	5. Motion #527: Comment Resolution. Move to accept the comment resolution for CID 3259 as proposed in 18/1786r0; CIDs 3014, 3015, and 3016 as proposed in 18/1745r0; CIDs 3100 and 3111 as proposed in 18/1789r2; and CIDs 3289, 3533, 3534, and 3535 as proposed in 18/1787r1.
		1. Move: Alecsander Eitan
		2. Second: Claudio da Silva
		3. Result: The motion is passed (13 Yes; 0 No; 0 Abstain).
	6. Motion #528: Comment Resolution. Move to accept the comment resolution for CIDs 3385, 3454, 3386, 3387, 3233, 3456, and 3621 as proposed in 18/1683r2; and CID 3364 as proposed in 18/1899r1.
		1. Move: Hiroyuki Motozula
		2. Second: Sang Kim
		3. Result: The motion is passed (13 Yes; 0 No; 0 Abstain).
	7. Motion #529: Comment Resolution. Move to accept the comment resolution for CIDs 3358, 3479, 3578, 3586, 3626, 3627, 3628, 3629, 3633, 3641, 3642, 3643, 3654, and 3481 as proposed in 18/1801r0; and CIDs 3462 and 3663 as proposed in 18/1879r1.
		1. Move: Alecsander Eitan
		2. Second: Assaf Kasher
		3. Result: The motion is passed (13 Yes; 0 No; 0 Abstain).
	8. Motion #530: Comment Resolution. Move to accept the comment resolution for CID 3443 as proposed in 18/1895r1.
		1. Move: Li-Hsiang Sun
		2. Second: Sang Kim
		3. Result: The motion is passed (13 Yes; 0 No; 0 Abstain).
	9. Motion #531: Draft. Move to include the text proposed in 18/2032r0 related to the EVM tests and requirements in clauses 29.5.11.1.1 and 29.6.11.1.1 of Draft 2.1 of the IEEE 802.11ay draft amendment.
		1. Move: Anuj Batra
		2. Second: Alecsander Eitan
		3. Result: The motion is passed (13 Yes; 0 No; 0 Abstain).
	10. Motion #532: Comment Resolution. Move to accept the comment resolution for CIDs 3252, 3253, 3254, 3255, 3256, 3257, 3269, 3403, 3419, and 3428 as proposed in 18/1854r1.
	11. Move: Chris Hansen
	12. Second: George Calcev
	13. Result: The motion is passed (11 Yes; 0 No; 0 Abstain).
	14. Motion #533: Comment Resolution. Move to accept the comment resolution for CIDs 3236, 3276, 3279, 3280, 3281, and 3707 as proposed in 18/1970r1.
		1. Move: Li-Hsiang Sun
		2. Second: Sang Kim
		3. Result: The motion is passed (13 Yes; 0 No; 0 Abstain).
6. Comment Resolution Presentations.
	1. Presentation by Tony Xiao Han (Huawei Technologies), TDD BF related CIDs. Doc. IEEE 11-18/1890r1.
		1. Opened floor for discussion
		2. No objections to add to the motions
	2. Presentation by Oren Kedem (Intel), TDD BF related CIDs. Doc. IEEE 11-18/1837r2.
		1. Opened floor for discussion
		2. No objections to add to the motions
	3. Presentation by George Calcev (Huawei), CIDs- LOS determination. Doc. IEEE 11-18/1894r3.
		1. Opened floor for discussion
		2. No objections to add to the motions
7. Motions
	1. Motion #534: Comment Resolution. Move to accept the comment resolution for CIDs 3058, 3221, 3310, 3505, 3506, and 3549 as proposed in 18/1890r1.
		1. Move: Tony Han
		2. Second: Assaf Kasher
		3. Result: The motion is passed (16 Yes; 0 No; 0 Abstain).
	2. Motion #535: Comment Resolution. Move to accept the comment resolution for CIDs 3476, 3508, 3509, 3548, 3220, 3477, 3478, 3547, 3222, 3546, 3498, 3502, 3499, 3500, 3501, 3504, 3503, 3224, 3507, 3508, 3509, 3542, 3639, 3633, and 3589 as proposed in 18/1837r2.
		1. Move: Oren Kedem
		2. Second: Claudio da Silva
		3. Result: The motion is passed (14 Yes; 0 No; 0 Abstain).
	3. Motion #536: Comment Resolution. Move to accept the comment resolution for CIDs 3056, 3057, 3238, 3239, 3240, 3241, 3305, 3306, 3363, 3402, and 3711 as proposed in 18/1894r3.
		1. Move: George Calcev
		2. Second: Tony Han
		3. Result: The motion is passed (16 Yes; 0 No; 0 Abstain).
8. Chair reviewed the timeline milestones (slides 69 and 70)
9. Chair reviewed the goals for the January 2019 interim meeting (slide 71).
10. Chair discussed the upcoming teleconference schedule per slide 72 of Doc. IEEE 802.11-18/1727r8. There is no objection.
11. Chair asked if there are any more agenda items to discuss during this meeting. None.
12. Chair asked if there are any objections to adjourn the meeting. None.
13. The Task Group AY Bangkok meeting was adjourned on November 15, 2018 at 14:37.